ATTACHMENT (B)

UNITED STATES DEPARTMENT OF COMMERCE
National Telecommunications and Information Administration
Washington, D.C. 20230

Mr. Tom Sullivan
Chief, International Bureau
Federal Communications Commission
45 L St NE,
Washington, DC 20554

Dear Mr. Sullivan:

The National Telecommunications and Information Administration (NTIA), on behalf of the Executive Branch agencies, provides the attached two proposals and one preliminary view for WRC-23:

WRC-23 Proposal for Agenda Item 1.5 addressing spectrum needs in the 470-960 MHz frequency range in Region 1

WRC-23 Proposal for Agenda Item 9, Issue 9.1 Topic C addressing fixed wireless broadband use of IMT

WRC-23 Preliminary View for Agenda Item 1.10 addressing non-safety aeronautical mobile applications

NTIA looks forward to reconciling these proposals with FCC for the upcoming CITEL PCC II meeting in April. If you have any questions, please contact our WRC coordinator, Mr. Charles Glass, who can be reached at (202) 714-1763 or cglass@ntia.gov.

Sincerely,

Steve Molina
Deputy Associate Administrator
Office of Spectrum Management

Enclosures (3)

UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 1.5: *to review the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 and consider possible regulatory actions in the frequency band 470-694 MHz in Region 1 on the basis of the review in accordance with Resolution* ***235 (WRC-15)****;*

Background

World Radiocommunication Conference 2023 (WRC-23) agenda item 1.5 addresses the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 and consideration of possible regulatory actions in the frequency band 470-694 MHz in Region 1.

Part of this band was studied under agenda item 1.1 of WRC-15 and resulted in new mobile allocations and identifications for IMT in portions of the frequency range for some administrations in Regions 2 and 3. Since WRC-15, a total of eight countries in Region 2 and seven in Region 3 have IMT identifications including these bands, with 28 countries in Region 3 having IMT identifications in the 698-790 MHz band.

Internationally harmonized bands benefit consumers, through economies of scale in infrastructure, devices, chipsets, etc., thereby reducing network deployment and consumer costs while simultaneously enabling global roaming. The United States has already made the 614-698 MHz band available for mobile broadband licensees through a successful incentive auction that concluded in April 2017. 3GPP has specified Band 71 (the range 663 – 698 MHz / 617 – 652 MHz) as an operating band for 5G New Radio (NR) and equipment is already available for that band.

Proposal:

NOC (for Region 2) USA/1.5/1

460-890 MHz

Region 2

470-512 BROADCASTING Fixed Mobile 5.292 5.293 5.295
512-608 BROADCASTING 5.295 5.297
608-614 RADIO ASTRONOMY Mobile-satellite except aeronautical mobile-satellite (Earth-to-space)
614-698 BROADCASTING Fixed Mobile 5.293 5.308 5.308A 5.309

Reasons: No change is proposed for Region 2. Any changes made to the Radio Regulations under WRC-23 agenda item 1.5 must not impact the existing allocations and identifications for Region 2, nor subject Region 2 to any changed procedural or regulatory provisions.

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UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 9, topic 9.1 c): *Use of International Mobile Telecommunications systems for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis*

Background

CPM 23-1 assigned both ITU-R Working Parties 5A and 5C with the responsibility to develop CPM text for WRC-23 agenda item 9.1, topic c):

Resolution **175 (WRC-19)** *resolves to invite the ITU Radiocommunication Sector* "to conduct any necessary studies on the use of IMT systems for fixed wireless broadband in the frequency bands allocated to the fixed service on primary basis, taking into account the relevant ITU-R studies, Handbooks, Recommendations and Reports," and *instructs the Director of the Radiocommunication Bureau "*to report to WRC-23 on the results of these studies"

Discussion

The ITU-R has already established a framework in which IMT and other mobile technologies can be used to provide fixed wireless access, including broadband access, in frequencies allocated to the fixed service on a primary basis. Work was performed several years ago by the predecessor group of ITU-R Study Group 5 which developed a body of Recommendations, Reports and Handbooks on Fixed Wireless Access (FWA). This body of work comprises a range of technologies, including IMT, that provide broadband wireless telecommunication applications in a fixed or stationary scenario. However, many of these F-series Recommendations regarding FWA are outdated and do not reflect the current capability of wireless broadband technology. Proponents of using IMT technologies for FWA can revise these existing F-series Recommendations to reflect the current state of wireless broadband technologies, including that of IMT.

The proponents of using IMT for FWA should revise these existing F-series recommendations and not seek further action by WRC-27; noting that primary fixed service bands are often co-allocated with those of the fixed satellite service, along with bands of other services. Therefore, such an agenda item at WRC-27 could have far-reaching consequences. The relevant F-series documentation should be summarized as part of the output of this topic to assist the Director in preparing his report.

Proposals:

NOC USA/9.1-C/1

ARTICLE 5

Frequency allocations

Reason: The United States is of the view that changes to the Radio Regulations are typically outside the scope of Agenda item 9.1 topics. Given that ITU-R SG 5 has already adopted Recommendations, Reports, and Handbooks regarding the use of mobile system technologies for fixed wireless broadband, a review and revision of these publications, as needed, is adequate to address AI 9.1, topic c).

SUP USA/9.1-C/2

RESOLUTION 175 (WRC-19)

Use of International Mobile Telecommunications Systems for Fixed Wireless Broadband in the Frequency Bands Allocated to the Fixed Service on a Primary Basis

Reason: Consequential change as no further action is required by WRC-23 to address this topic.

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UNITED STATES OF AMERICA

DRAFT PRELIMINARY VIEWS ON WRC-23

AGENDA ITEM 1.10: to conduct studies on spectrum needs, coexistence with radio communication services and regulatory measures for possible new allocations for the aeronautical mobile service for the use of non-safety aeronautical mobile applications, in accordance with Resolution **430 (WRC-19)**;

BACKGROUND:

Resolution **430 (WRC-19)**, calls for:

1) Sharing and compatibility studies in the 22-22.21 GHz band, already allocated on a primary basis to mobile, except aeronautical mobile to determine if the "except aeronautical mobile" restriction can be revised or deleted
2) Sharing and compatibility studies on a possible new primary allocation to the aeronautical mobile service (AMS) for non-safety aeronautical applications in the frequency band 15.4-15.7 GHz.
3) Definition of appropriate protection for passive services and the radio astronomy service (RAS) allocated in adjacent frequency bands from unwanted emissions of the AMS.

The frequency range 15.4-15.7 GHz is widely used by the radiolocation and aeronautical radionavigation services for critical applications with a significant investment in airborne radar applications within this band. ITU-R past studies show sharing between RLS and AMS could be difficult, requiring extremely large separation distances. Additionally, the sub-band 15.43-15.63 GHz is allocated to the fixed-satellite service (space-to-Earth) on a primary basis for use by feeder links of non-geostationary systems in the mobile satellite service. The aeronautical radionavigation service in the 15.4-15.7 GHz band is used for landing systems and unmanned aircraft detect and avoid systems. An ITU-R Recommendation is currently being developed to provide characteristics and protection requirements for these aeronautical radionavigation systems (Document 5B/76). The sharing studies for the 15.4-15.7 GHz band should take into account the characteristics and protection requirements being developed and the airborne mobile nature of the aeronautical radionavigation systems that operate in the 15.4-15.7 GHz band.

The 22-22.21 GHz frequency band under consideration is adjacent to the 22.21-22.5 GHz frequency band allocated to the EESS (passive). The 22.21-22.5 GHz frequency band allows for remote sensing observations near an H_2O absorption line that is essential not only for measuring atmospheric water vapor, but also for reducing error in other geophysical parameters due to the presence of water vapor. Therefore, adjacent band studies are required to ensure protection of the EESS (passive) in the 22.21-22.5 GHz frequency band.

The United States notes the adjacent 15.35-15.4 GHz frequency band, for which footnote **No. 5.340** applies, is allocated to both the radio astronomy service (RAS) and Earth exploration-satellite service (EESS) (passive) on a primary basis. Additionally, the frequency band 22.21-22.5 GHz is allocated to the RAS and EESS (passive) on a primary basis, and is subject to footnote **No 5.149**, which indicates the particular challenge aeronautical sources of emissions pose for the RAS. The challenge to RAS increases as mobile platforms are moved to increasingly high altitudes because of the line-of-sight to RAS sites, typically sited in

geographically remote locations. RAS can often be protected with a combination of power-level restrictions, geographic avoidance and/or coordination zones, and avoidance of line-of-sights, but aeronautical mobile applications would require careful sharing and compatibility studies and the potential inclusion of restricted zones around RAS sites. The United States also notes the growing importance of geographic radio quiet zones for the protection of RAS and any new allocation should recognize the established radio quiet zones internationally.

U.S. VIEW: The United States supports consideration of possible new allocations to the non-safety aeronautical mobile applications service in the ranges 15.4-15.7 GHz and 22-22.21 GHz. Such consideration would need to take into account the results of spectrum needs and sharing studies, as well as the need to provide protection and not impose constraints on incumbent services within the frequency ranges, 15.4-15.7 GHz and 22-22.21 GHz, and adjacent frequency bands, as appropriate. The studies need to take into account the latest characteristics and protection requirements for incumbent systems, including those that are currently under development. The United States is of the view that protection levels for the RAS, found in Recommendation ITU-R RA.769-2, are appropriate for the protection of the radio astronomy service from adjacent-band transmissions including harmonics and out-of-band emissions.